

Title (en)

Interferometer for determining characteristics of an object surface

Title (de)

Interferometer zur Bestimmung von Eigenschaften einer Objektoberfläche

Title (fr)

Interferomètre pour la détermination de caractéristiques de la surface d'un objet

Publication

**EP 2108919 A2 20091014 (EN)**

Application

**EP 09164936 A 20060119**

Priority

- EP 06718763 A 20060119
- US 64544805 P 20050120

Abstract (en)

Disclosed is a system including: (i) an interferometer configured to direct test electromagnetic radiation to a test surface and reference electromagnetic radiation to a reference surface and subsequently combine the electromagnetic radiation to form an interference pattern, the electromagnetic radiation being derived from a common source; (ii) a multi-element detector; and (iii) one or more optics configured to image the interference pattern onto the detector so that different elements of the detector correspond to different illumination angles of the test surface by the test electromagnetic radiation. The measurements made by the detector elements provide ellipsometry/reflectometry data for the test surface. The disclosed system can further be reconfigured to operate in a different mode (e.g., a profiling mode) in which the different elements of the detector correspond to different locations of the test surface.

IPC 8 full level

**G01B 9/02** (2006.01); **G01B 9/023** (2006.01); **G01B 11/06** (2006.01); **G01N 21/21** (2006.01)

CPC (source: EP KR US)

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Citation (applicant)

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Designated contracting state (EPC)

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DOCDB simple family (publication)

**US 2006158659 A1 20060720; US 7446882 B2 20081104**; AT E441831 T1 20090915; DE 602006008896 D1 20091015; EP 1853874 A1 20071114; EP 1853874 B1 20090902; EP 2108919 A2 20091014; EP 2108919 A3 20100505; EP 2108919 B1 20150311; JP 2008528972 A 20080731; JP 2010101898 A 20100506; JP 4768754 B2 20110907; JP 5107331 B2 20121226; KR 101006422 B1 20110106; KR 101006423 B1 20110106; KR 20070104615 A 20071026; KR 20090073221 A 20090702; TW 200632306 A 20060916; TW 201312094 A 20130316; TW I409451 B 20130921; TW I428582 B 20140301; US 2006158657 A1 20060720; US 2006158658 A1 20060720; US 2010134786 A1 20100603; US 7428057 B2 20080923; US 7616323 B2 20091110; US 7952724 B2 20110531; WO 2006078718 A1 20060727

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